

(a) applying a mesomorphous film of a metal complex on a surface of the substrate;

(b) exposing, in a first atmosphere, a first area, having a first shape, of said film to a particle beam to cause said metal complex in said first area to undergo a transformation into a first metal-containing material adherent to said substrate and one or more ligand byproducts of a first kind at least some proportion of which are driven off during the course of said transformation;

(c) optionally driving off an unreacted amount of said metal complex and a remainder of said one or more ligand byproducts of a first kind that are not driven off during the course of said transformation;

(d) exposing, in a second atmosphere, a second area of said film, having a second shape, adjacent to said first area, to electromagnetic radiation of a wavelength suitable to cause said metal complex in said second area to undergo a photo-chemical reaction, said reaction transforming said metal complex in said second area into a second metal containing material adherent to said substrate and one or more ligand byproducts of a second kind at least some proportion of which are driven off during the course of said photochemical reaction; and optionally

(e) driving off an unreacted amount of said metal complex and a remainder of said one or more ligand byproducts of a second kind that are not driven off during the course of said photochemical reaction.

*end
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